

WHAT IS CLAIMED IS:

1 ~~SAI~~ A voice and data communication system comprising a customer  
2 premises equipment (CPE) element and a line card for transferring communication  
3 signals between a subscriber and a network, said line card comprising:

4 an analog front end for coupling said line card to said CPE through a  
5 transmission medium;

6 a digitizer for digitizing received voice signals;

7 a packetizer for packetizing said digitized voice signals;

8 a modem for transmitting voice and data packets to said CPE; and

9 a system interface for coupling said line card to at least one network;

10 wherein said line card digitizes and packetizes said voice signals upon  
11 failure of said CPE.

1 2. A system as defined in claim 1, wherein said CPE comprises:

2 a digitizer for digitizing received voice signals;

3 a packetizer for packetizing said digitized voice signals;

4 a modem for transmitting voice packets; and

5 a switch for bypassing said packetizing system to a Plain Old Telephone  
6 System (POTS) terminal.

1 3. A system as defined in claim 2, wherein said switch is a relay for  
2 switching between said packetizer and said POTS system.

1 4. A system as defined in claim 3, wherein the position of said switch  
2 is determined by a signal, said signal indicating the status of the connection between said  
3 CPE and said line card.

1 5. A system as defined in claim 1, wherein said modem is a Digital  
2 Subscriber Line (DSL) modem.

1           6.     A system as defined in claim 2, wherein said line card packetizes  
2     said voice signals upon failure of said CPE to do so, and wherein digitizing and  
3     packetizing equipment of said CPE is bypassed.

1           7.     A system as defined in claim 2, wherein said failure is a power  
2     failure at said subscriber's location.

1           8.     A system as defined in claim 2, wherein said failure is inability to  
2     synchronize a DSL modem on said CPE with a DSL modem on said line card.

1           9.     A system as defined in claim 2, wherein said digitizers provide  
2     high quality audio encoding.

1           10.    A system as defined in claim 2, wherein said packetizers provide  
2     high quality audio encoding.

1           11.    A system for providing a voice signal for transmission comprising  
2     a line card for receiving said voice signal from a telephone, said line card including:

3                 an analog front end for coupling said line card to said telephone;

4                 a digitizer for digitizing received voice signals;

5                 a packetizer for packetizing said digitized voice signals;

6                 a modem for receiving voice packets from a CPE and transmitting said  
7     voice packets to a data network;

8                 a system interface for coupling said line card to a voice network and said  
9     data network; and

10                a controller for controlling the destination of said voice signal;

11                wherein said system can provide said voice signals to said voice network  
12     and said data network.

1           12.    A system as defined in claim 11, wherein said line card is operative  
2     to receive a data signal on the same loop as said voice signal, said analog front end

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3 separates said data signal from said voice signal, and said modem transmits said data  
4 signal to said data network.

1 13. A system as defined in claim 11, wherein said modem is a DSL  
2 modem.

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13. A system as defined in claim 11, wherein said modem is a DSL modem.